

1 **CLAIMS**

2 1. A method, comprising:

3 periodically identifying a location of a first computer that is used by a first  
4 computer user;

5 receiving a request from a computing unit for the location of the first  
6 computer user;

7 determining the last known location of the first computer;

8 transmitting the location of the first computer to the computing unit; and

9 recognizing the location of the first computer as the location of the first  
10 computer user.

11  
12 2. The method as recited in claim 1, wherein the first computer is a  
13 mobile computer operating within a wireless network.

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15 3. The method as recited in claim 1, wherein the periodically identifying  
16 a location of the first computer comprises:

17 associating the first computer user with the location of the first computer;

18 transmitting the location of the first computer and the associated first  
19 computer user to a network server during each of several recurring time periods;  
20 and

21 storing the transmitted information on the network server.

22  
23 4. The method as recited in claim 3, wherein the location of the first  
24 computer is represented in absolute geographical coordinates.

1           5.    The method as recited in claim 3, wherein the location of the first  
2 computer is represented in coordinates relative to a known absolute location.

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4           6.    The method as recited in claim 3, wherein the location of the first  
5 computer is represented as a geographical unit.

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7           7.    The method as recited in claim 1, wherein the periodically identifying  
8 a location of the first computer further comprises:

9                associating the first computer user name with the location of the first  
10 computer;

11               transmitting the location of a network node to which the first computer is  
12 connected, the transmitting occurring once during each of several recurring time  
13 periods; and

14               storing the location of the network node on a network server together with  
15 the first computer user name.

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17           8.    The method as recited in claim 1, further comprising time-stamping  
18 the location of the first computer with the time that the first computer was  
19 identified.

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21           9.    The method as recited in claim 8, wherein the determining the last  
22 known location of the first computer further comprises determining the location of  
23 the first computer that has a most recent time stamp.

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2       **10.**     The method as recited in claim 8, wherein the determining the last  
3 known location of the first computing unit further comprises:

4             calculating a time differential between a current time and the time stamp of  
5 a most recent location identified for the first computer;

6             comparing the time differential with a pre-defined time threshold;

7             defining the last known location of the first computer as the most recent  
8 location if the time differential is less than the time threshold; and

9             invoking a location tracking service to identify a current location of the first  
10 computer as the last known location if the time differential is greater than the time  
11 threshold.

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13       **11.**     The method as recited in claim 1, wherein:

14             the periodically identifying a location of a first computer that is used by a  
15 first computer user further comprises periodically identifying a location of at least  
16 a second computer that is used by the first computer user and detecting an active  
17 signal from the computer that was most recently used by the first computer user;  
18 and

19             the determining the last known location of the first computer comprises  
20 determining the last known location of the computer indicating the active signal.

1           **12.**    The method as recited in claim 1, wherein the determining the last  
2 known location of the first computing unit further comprises:

3                   searching a server database having a plurality of computer users and  
4 locations contained therein; and

5                   identifying a location associated with the first computer user.

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7           **13.**    The method as recited in claim 1, further comprising registering the  
8 first computer, and wherein the identifying a location of the first computer only  
9 occurs upon the receiving a request from the computing unit for the location of the  
10 first computer.

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12           **14.**    The method as recited in claim 1, wherein the last known location of  
13 the first computer is transmitted to the computing unit upon a request by the  
14 computing unit only if the computing unit is authorized to determine the location  
15 of the first computer.

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17           **15.**    The method as recited in claim 1, further comprising encrypting the  
18 location of the first computer prior to transmitting the location of the first  
19 computer.

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21           **16.**    A method, comprising:  
22                   determining a location of a computing unit;  
23                   periodically transmitting, from the computing unit, the location of the  
24 computing unit to a network server together with a user name of a user using the  
25 computing unit; and

1 including an active signal with the periodically transmitted information  
2 when the user is actively using the computing unit.

3  
4 **17.** The method as recited in claim 16, wherein:  
5 the computing unit is a mobile computing unit; and  
6 the network server is a wireless network server.

7  
8 **18.** The method as recited in claim 16, further comprising time-  
9 stamping the transmission to the network server and transmitting the time stamp  
10 with the transmitted information.

11  
12 **19.** The method as recited in claim 16, wherein the determining a  
13 location of a computing unit comprises receiving RF signals from a plurality of RF  
14 beacons having known locations and using environmental profiling to establish the  
15 location of the computing unit.

16  
17 **20.** The method as recited in claim 16, wherein the location is rendered  
18 in latitude and longitude coordinates.

19  
20 **21.** The method as recited in claim 16, wherein the location is rendered  
21 in latitude, longitude and altitude coordinates.

22  
23 **22.** The method as recited in claim 16, wherein the location is rendered  
24 in coordinates relative to a known location.

1           **23.**    The method as recited in claim 16, wherein the location is rendered  
2 as a geographical unit.

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4           **24.**    The method as recited in claim 16, wherein the location of the  
5 computing unit is the known location of a network node to which the computing  
6 unit is connected.

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8           **25.**    The method as recited in claim 16, wherein the user actively using  
9 the computing unit further comprises the user having used the computing unit  
10 within a pre-defined time period.

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12           **26.**    The method as recited in claim 16, wherein the periodically  
13 transmitting the location of the computer unit to a network server only occurs  
14 upon a request from the network server for the computer unit to update the  
15 location of the computer unit.

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17           **27.**    The method as recited in claim 16, further comprising encrypting  
18 the location of the computing unit prior to transmitting the location of the  
19 computing unit to the network server.

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21           **28.**    A system, comprising:  
22           a server having memory;  
23           a user database stored in the memory of the server, the user database  
24 containing a user field for storing a user name of a mobile computer user, and a  
25

1 last known location field for storing a most recent location of a computer user  
2 identified in a corresponding user field;

3 a wireless access point configured to receive network transmissions from  
4 one or more mobile computers;

5 a mobile computer having memory and a wireless network interface for  
6 communication with the wireless access point;

7 a location tracking system in the mobile computer memory configured to  
8 determine a location of the mobile computer;

9 a location manager in the mobile computer memory configured to  
10 periodically transmit the location of the mobile computer and the user name of a  
11 mobile computer user to the server via the wireless network interface; and

12 a computing unit having a computing unit location manager configured to  
13 search the user database of the server to determine information regarding the  
14 location of a mobile user.

15  
16 **29.** The system as recited in claim 28, wherein the computing unit is a  
17 stationary computing unit.

18  
19 **30.** The system as recited in claim 28, wherein the computing unit is a  
20 mobile computing unit.

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22 **31.** The system as recited in claim 28, wherein:  
23 the mobile computer further comprises a clock;

24

25

1 the location manager is further configured to transmit a time of  
2 transmission to the server together with the location and user name information;  
3 and

4 the user database further comprises a time field for storing the time that a  
5 transmission identifying the location of the mobile user and the user name of the  
6 mobile computer user is received from the mobile computer.

7  
8 **32.** The system as recited in claim 28, wherein the user database further  
9 comprises an active field indicating if the mobile computer user has used the  
10 mobile computer within a specified time period.

11  
12 **33.** The system as recited in claim 28, wherein the location manager  
13 transmits the location of the mobile computer in absolute coordinates.

14  
15 **34.** The system as recited in claim 28, wherein the location manager  
16 transmits the location of the mobile computer in coordinates relative to a known  
17 absolute location.

18  
19 **35.** The system as recited in claim 28, wherein the location manager  
20 transmits the location of the mobile computer as a geographic unit.

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22 **36.** The system as recited in claim 28, wherein the location manager  
23 transmits the location of a network node with which the mobile computer is  
24 communicating as the location of the mobile computer.

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**37.** The system as recited in claim 28, wherein:

the mobile computer is a first computer;

the system further comprises a second computer having a location manager;

the user database further comprises an active field;

the mobile computer user is logged onto both the first mobile computer and the second computer;

the location manager of the first computer and the location manager of the second computer are further configured to transmit an active signal for a specified period of time after the respective computers are used;

the active field corresponding to the first computer indicating the mobile computer user last used the first computer when the active signal is transmitted from the first computer;

the active field corresponding to the second computer indicating the mobile computer user last used the second computer when the active signal is transmitted from the second computer; and

only one active field indicating activity by the mobile computer user at any given time.

**38.** The system as recited in claim 28, wherein:

the user database further comprises an OK field that contains data that identifies one or more system users that are authorized to receive data regarding the location of the mobile computer user identified in the corresponding user field.

1           39.    The system as recited in claim 28, wherein the location manager of  
2 the computing unit is further configured to:

3               search the user database to locate an entry for a specific user;

4               calculate a time differential between a current time and a time stored in the  
5 time field corresponding to the specific user if the specific user is found;

6               compare the time differential to a time threshold;

7               recognize the location contained in the last known location field  
8 corresponding to the specific user as the location of the specific user if the time  
9 differential is within the time threshold;

10              transmit a signal to cause the location manager of the mobile computer to  
11 invoke the location tracking system of the mobile computer if the time differential  
12 is not within the time threshold, to determine the location of the mobile computer  
13 and transmit location and user information to the server where it is stored in the  
14 user database; and

15              recognize the newly stored location contained in the last known location  
16 field corresponding to the specific user as the location of the specific user.  
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40. A network server, comprising:

memory;

a user database stored in the memory containing one or more records, each record including:

a user field in the user database to store a user identifier; and

a last known location field in the user database to store a most recent location identified for the corresponding user field.

41. The network server as recited in claim 40, wherein each record further comprises a time field to store a time that the corresponding last known location was stored.

**42.** The network server as recited in claim 40, wherein each record further comprises an active field to store an indication of whether the user identified in the corresponding user field has been active on a client connected to the server within a specified period of time.

**43.** The network server as recited in claim 40, further comprising a wireless access point to which a mobile computing unit may connect to access the network.

**44.** The network server as recited in claim 43, further comprising a connection to wired network components.

1       **45.**     A mobile computing unit, comprising:  
2       memory;  
3       a wireless network interface configured to connect the mobile computing  
4 unit to a wireless access point of a remote server;  
5       a location tracking service configured to determine a location of the mobile  
6 computer unit; and  
7       a location manager configured to periodically transmit the location of the  
8 mobile computing unit to the remote server via the wireless network interface.

9  
10       **46.**     The mobile computing unit as recited in claim 45, wherein the  
11 location manager is further configured to transmit a user name of a user logged  
12 onto the mobile computing unit to the remote server together with the location of  
13 the mobile computing unit.

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15       **47.**     The mobile computing unit as recited in claim 45, wherein the  
16 location manager is further configured to transmit an active signal to the remote  
17 server together with the location of the mobile computing unit when a user logged  
18 onto the mobile computing unit has actively used the unit within a specified period  
19 of time.

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21       **48.**     The mobile computing unit as recited in claim 45, further  
22 comprising a clock, and wherein the location manager is further configured to  
23 time-stamp the transmission of the location information with a time that the  
24 transmission is sent.

25

1           **49.**   The mobile computing unit as recited in claim 45, wherein the  
2 location manager identifies and transmits the location of a network node with  
3 which the mobile computing unit is communicating as the location of the mobile  
4 computing unit.

5  
6           **50.**   The mobile computing unit as recited in claim 45, wherein the  
7 location manager is configured to invoke the location tracking service when  
8 commanded to do so by a second computing unit or the server.

9  
10          **51.**   The mobile computing unit as recited in claim 45, wherein the  
11 location manager transmits an absolute location of the mobile computing unit to  
12 the remote server.

13  
14          **52.**   The mobile computing unit as recited in claim 45, wherein the  
15 location manager transmits the a location of the mobile computing unit relative to  
16 a known absolute location.

17  
18          **53.**   The mobile computing unit as recited in claim 45, wherein the  
19 location manager transmits a geographic region to the remote server as the  
20 location of the mobile computing unit.

21  
22          **54.**   The mobile computing unit as recited in claim 45, wherein the  
23 location manager is further configured to encrypt the location of the mobile  
24 computing unit before transmitting the location of the mobile computing unit to  
25 the remote server.

1  
2       **55.**     A method for locating a mobile computer user in a wireless network,  
3 comprising:

4             periodically identifying a location of a mobile computer that is used by a  
5 mobile user and associating a time stamp with the location indicating a time at  
6 which the location was identified;

7             transmitting the location of the mobile computer to a network server  
8 together with the time stamp and a name of the mobile user;

9             storing the transmitted information on the network server;

10            receiving a request from a computing unit for the location of the mobile  
11 user;

12            determining the last known location of the mobile computer by accessing  
13 the network server and finding the location having a most recent time stamp; and

14            recognizing the last known location of the mobile computer as the location  
15 of the mobile user.

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17       **56.**     The method as recited in claim 55, wherein the periodically  
18 identifying a location of a mobile computer further comprises identifying the  
19 location of the mobile user by measuring relative strengths of radio frequency  
20 transmissions emitted from a plurality of base stations.

21  
22       **57.**     The method as recited in claim 55, further comprising:

23             transmitting an active signal together with the location information if the  
24 mobile user has actively used the mobile computer within a specified period of  
25 time.

1  
2       **58.**     A system, comprising:

3       a server having memory;

4       a user database stored in the memory of the server, the user database  
5       containing a user field for storing a user name of a mobile computer user, and a  
6       last known location field for storing a most recent location of a computer user  
7       identified in a corresponding user field;

8       a wireless access point configured to receive network transmissions from  
9       one or more mobile computers;

10       a mobile computer having memory and a wireless network interface for  
11       communication with the wireless access point;

12       a location tracking system in the mobile computer memory configured to  
13       determine a location of the mobile computer;

14       a location manager in the mobile computer memory configured to transmit  
15       the location of the mobile computer and the user name of a mobile computer user  
16       to the server via the wireless network interface when a request to do so is received  
17       from the server; and

18       a computing unit having a computing unit location manager configured to  
19       search the user database of the server to determine information regarding the  
20       location of a mobile user.  
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